

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicants thank the Examiner for carefully considering this application.

Disposition of Claims

Claims 57-95 are pending in the present application. Claims 57, 72, 86, and 91 are independent. The remaining claims depend, either directly or indirectly, from claims 57, 72, 86, and 91.

Claim Amendments

Claims 57-95 are amended by way of this reply for clarification and to correct antecedent basis issues. Applicants respectfully assert no new matter has been introduced by way of these amendments as support for these amendments may be found, for example, in paragraphs [1002], [1022], [1041], [1046], and [1047] of the originally filed specification and the claims as originally filed.

Rejections under 35 U.S.C. § 112

Claims 57-95

Claims 57-95 stand rejected under 35 U.S.C. § 112, second paragraph, as failing to comply with the written description requirement and the enablement requirement. For reasons set for the below, this rejection is respectfully traversed.

In the Office Action, the Examiner asserts that teaching of the limitations “executing a second pop front instruction without reading the back counter after executing the first pop back instruction and the first pop front instruction” and “executing a second push front instruction

without reading the back counter after executing the first push back instruction and the first push front instruction” cannot be located in the instant application and that the limitations are not taught in the specification. Specifically, the Examiner asserts that the Examiner is unable to locate a teaching of how the instant application determined whether the array is empty or full without using the back pointer. *See*, Office Action dated September 22, 2008 in pages 3 and 4.

Applicants respectfully point the Examiner’s attention to paragraphs [1035] and [1036] of the instant application where it is disclosed that the test performed in lines 3-5 and 6-7 of the illustrative `pop_right` (*i.e.*, `pop front` instruction in the claim language) access operation can be stated as follows: if R hasn’t changed and `S[R-1]` (*i.e.*, position R-1 within Array S) is null, then the deque must be empty since the location to the left of R always contains a value unless there are no items in the deque. Thus, paragraphs [1035] and [1036] of the instant application teaches how the array is determined to be empty or not without using the back pointer. Similar teachings can also be found in paragraphs [1041], [1042], and [1-46]-[1-48] that teaches how the array is determined to be full or not without using the back pointer.

In view of the above, the limitations “executing a second `pop front` instruction without reading the back counter after executing the first `pop back` instruction and the first `pop front` instruction” and “executing a second `push front` instruction without reading the back counter after executing the first `push back` instruction and the first `push front` instruction” are taught in the specification and withdrawal of this rejection is respectfully requested.

Claims 86-95

Claims 86-95 stand rejected under 35 U.S.C. § 112, second paragraph, as failing to particular point out and distinctly claim the subject matter which applicant regards as the invention. For reasons set for the below, this rejection is respectfully traversed.

In the Office Action, the Examiner asserts that the “means for” language invokes 35 USC 112, 6th paragraph requirements. *See*, Office Action dated September 22, 2008 in page 4. By way of this reply, claims 86-95 as amended to no longer recite the “means for” language. Therefore, 35 USC 112, 6th paragraph requirements no longer apply and withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 101

Claims 57-95 stand rejected under 35 U.S.C. § 101 as being directed toward non-statutory subject matter. For reasons set for the below, this rejection is respectfully traversed.

Claims 57-85

In stating that claims 57-85 is directed toward non-statutory subject matter, the Examiner asserts that there is no recitation that the method in claims 57-85 is being performed on a processor, system, or other apparatus. *See*, Office Action dated September 22, 2008 in page 5. By way of this reply, claims 57 and 72 are amended to recite, in part, “a computer implemented method performed on a processor.” Claims 58-71 and 73-85 depend, directly or indirectly, from claims 57 and 72 and include all limitations of claims 57 and 72. Therefore, claims 57-85 no longer direct toward non-statutory subject matter and withdrawal of this rejection is respectfully requested.

Claims 86-95

In stating that claims 86-95 is directed toward non-statutory subject matter, the Examiner asserts that claims 57-85 include no explicit recitation of any hardware or physical component and, therefore, directed toward software per se. *See*, Office Action dated September 22, 2008 in page 5. By way of this reply, claims 86 and 91 are amended to recite, in part, “a processor and memory,” which are both hardware components. Claims 87-90 and 92-95 depend, directly or indirectly, from claims 86 and 91 and include all limitations of claims 86 and 91. Therefore, claims 86-95 no longer direct toward non-statutory subject matter and withdrawal of this rejection is respectfully requested.

Conclusion

Applicants believe this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03226/959002).

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Respectfully submitted,

By /Robert P. Lord/

Robert P. Lord
Registration No.: 46,479
OSHA · LIANG LLP
3945 Freedom Circle, Suite 300
Santa Clara, California 95054
(408) 727-0600
(408) 727-8778 (Fax)
Attorney for Applicants